Calculation Methods for Grain Servings in the Child and Adult Care Food Program

This guidance applies through September 30, 2021, to child care centers, family day care homes, emergency shelters, at-risk afterschool care centers, and adult day care centers that participate in the U.S. Department of Agriculture's (USDA) Child and Adult Care Food Program (CACFP). Effective October 1, 2021, the required amount for the grains component changes to ounce equivalents. This guidance does not apply to the CACFP infant meal patterns for birth through 11 months.

To credit as the grains component, grain products and recipes must be whole grain, enriched, or contain a blend of whole and enriched grains. Bran and germ credit the same as enriched and whole grains. Cooked and ready-to-eat (RTE) breakfast cereals must be whole grain, enriched, or fortified. For additional guidance on the CACFP meal patterns for children and crediting requirements for the grains component, visit the Connecticut State Department of Education's (CSDE) Meal Patterns for CACFP Child Care Programs webpage and the "Grains Component for CACFP Child Care Programs" section of the CSDE's Crediting Foods in CACFP Child Care Programs webpage. For additional guidance on the CACFP adult meal patterns and crediting requirements for the grains component, visit the CSDE's Meal Patterns for CACFP Adult Day Care Centers webpage and the "Grains Component for CACFP Adult Day Care Centers" section of the CSDE's Crediting Foods in CACFP Adult Day Care Centers webpage.

The CACFP meal patterns for children and adults require the grains component at breakfast and lunch. The grains component may be one of the two required snack components. The USDA allows two methods for determining the CACFP grain servings of creditable grain products and recipes.

- Method 1 is used for commercial grain products, and may also be used for standardized recipes that indicate the weight of the prepared (cooked) serving.
- Method 2 is used for standardized recipes and may also be used for commercial grain products that have a product formulation statement (PFS) stating the weight of creditable grains per serving.



CACFP facilities may use either method, but must document how the crediting information is determined for each grain product and recipe (see "Choosing a Calculation Method"). For some commercial products, method 2 is required (see "When Method 2 is Required for Commercial Products").

CACFP facilities are not required to use these methods for commercial products that have a Child Nutrition (CN) label. CN-labeled products credit based on the stated crediting information for grain ounce equivalents. CN labels are available only for main dish entrees that contribute to the meat/meat alternates component, such as pizza, breaded chicken nuggets, and cheese ravioli. However, CN labels usually include the crediting information for grains, vegetables, and fruits that are part of the product. The USDA's Authorized Labels and Manufacturers webpage lists approved CN-labeled products and manufacturers. For more information, review the CSDE's resource, *Using Child Nutrition (CN) Labels in the CACFP*.

Method 1: Weights or Volumes (USDA's Exhibit A Chart)

Method 1 uses the USDA's chart, *Exhibit A: Grain Requirements for Child Nutrition Programs* (Exhibit A) to determine the required weight (groups A-E) or volume (groups H-I) for the appropriate grain group. The required amounts for the grains component are not the same for all Child Nutrition Programs. The CSDE's resource, *Grain Servings for the CACFP*, lists the Exhibit A grain servings that apply to the CACFP through September 30, 2021. Groups F and G are not included because grain-based desserts do not credit as the grains component in the CACFP meal patterns.

The amount of a food that provides the required grain servings varies because different types of foods contain different amounts of creditable grains. For example, to provide one serving of the grains component through September 30, 2021, a whole-grain or enriched roll (group B) must weigh 25 grams (0.9 ounce) and a whole-grain or enriched blueberry muffin (group D) must weigh 50 grams (1.8 ounce). The minimum creditable amount is ½ serving.

- Groups A-E (baked goods): Baked goods (such as crackers, animal and graham crackers, breads, rolls, taco shells, muffins, waffles, and pancakes) require 14.75 grams of creditable grains to credit as one serving of the grains component; or 7.38 grams of creditable grains to credit as ½ serving of the grains component. The amount that provides one serving varies from 20 grams (0.7 ounces) for foods in group A to 63 grams (2.2 ounces) for foods in group E.
- **Group H (cereal grains):** Pasta, cooked breakfast cereals, and cereal grains (such as amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat) require ½ cup cooked or 25 grams (0.9 ounce) dry to credit as one serving of the grains component; or ¼ cup cooked or 13 grams (0.5 ounce) dry to credit as ½ serving of the grains component. Cereal grains typically credit based on the cooked serving, but CACFP facilities may choose to use the dry uncooked weight. For guidance on the crediting and serving size requirements for cooked breakfast cereals, review the CSDE's resource, *Crediting Breakfast Cereals in the CACFP*.

Dry cereal grains used as an ingredient in a recipe (such as rolled oats in bread) credit the same as groups A-G; they require 14.75 grams of creditable grains to credit as one serving.

• Group I (RTE breakfast cereals): The CACFP meal patterns for children require ½ cup or ⅓ ounce (10 grams) for ages 1-2; ⅓ cup or ½ ounce (14 grams) for ages 3-5; and ¾ cup or 1 ounce (28 grams) for ages 6-12, and ages 13-18 in at-risk afterschool care centers and emergency shelters. The CACFP adult meal patterns require ¾ cup or 1 ounce (28 grams) to credit as one serving of the grains component. If the appropriate volume of cereal weighs less than the required amount, it still credits as the serving. For example, ⅓ cup of flaked cereal that weighs 13 grams credits as ½ serving of the grains component for ages 3-4. For guidance on crediting RTE breakfast cereals, review the CSDE's resource, *Crediting Breakfast Cereals in the CACFP*.

The USDA's Exhibit A chart (method 1) applies to all creditable commercial grain products. This method may also be used for grain recipes that indicate the **weight** of the prepared (cooked) serving. If the recipe does not provide this information, the CACFP facility must determine the average weight per serving. For more information, review the CSDE's form, *Yield Study Data Form for Child Nutrition Programs*.

Online Calculation Tool for Method 1

The USDA's online Exhibit A Grains Tool helps menu planners determine a product's grain servings, and the required amount to obtain a specific meal pattern contribution. For more information, watch the USDA's webinars, Exhibit A Grains Tool to the Rescue and How to Maximize the Exhibit A Grains Tool.

Method 2: Creditable Grains

Method 2 determines the CACFP grain servings of creditable products and recipes by calculating the total weight (grams) of creditable grains per serving. Creditable grains include whole grains, enriched grains, bran, and germ. To credit as one serving of the grains component through September 30, 2021, foods in groups A-E of the USDA's Exhibit A chart must contain 14.75 grams of creditable grains, and foods in group H must contain 25 grams of creditable grains. To credit as ½ serving, the required amounts are 7.38 grams of creditable grains for groups A-E and 13 grams of creditable grains for group H.

• Commercial products: CACFP facilities must obtain a manufacturer's product formulation statement (PFS) stating the weight of all creditable grains per serving. This information cannot be determined from the product's Nutrition Facts label or packaging. For more information, review the CSDE's resources, Using Product Formulation Statements in the CACFP and Accepting Processed Product Documentation in the CACFP, and the USDA's handouts, Product Formulation Statement for Documenting Grains/Breads Servings, and Tips for Evaluating a Manufacturer's Product Formulation Statement. For additional guidance on documentation for commercial products, visit the "Crediting Commercial Processed Products in CACFP Child Care Programs" or "Crediting Commercial Processed Products in CACFP Adult Day Care Centers" sections of the CSDE's CACFP webpages.

• Foods made on site: CACFP facilities must determine the amount of creditable grains per serving from the weight of each grain ingredient listed in the recipe. If the recipe lists grain ingredients only by volume (e.g., cups or quarts), the CACFP facility must calculate the equivalent weight (grams) for each grain ingredient (see "Method 2 calculation for recipes listing the volume of grain ingredients"). For information on crediting recipes, visit the "Crediting Foods Prepared on Site in CACFP Child Care Programs" or "Crediting Foods Prepared on Site in CACFP Adult Day Care Centers" sections of the CSDE's CACFP webpages.

For guidance on identifying creditable grains for the CACFP meal patterns, review the CSDE's resources, How to Identify Creditable Grains in the CACFP, Whole Grain-rich Criteria for the CACFP, Crediting Breakfast Cereals in the CACFP, Crediting Whole Grains in the CACFP, and Crediting Enriched Grains in the CACFP.

When Method 2 is Required for Commercial Products

There are some situations when CACFP facilities must use method 2 to determine the ounce equivalents contribution of commercial grain products. For each situation below, CACFP facilities must obtain a PFS from the manufacturer.

- 1. **Multiple creditable grains:** A creditable grain is not the first ingredient (excluding water), but the product contains more than one creditable grain. CACFP facilities must obtain a PFS from the manufacturer stating that the **combined weight** of all creditable grains is more than the weight of the first ingredient, excluding water. For example, the yellow corn flour in the product below is not a creditable grain because it is not whole grain, enriched, or nixtamalized. To credit in CACFP meals and snacks, the product's PFS must indicate that the combined weight of the two whole grains (whole-wheat flour and rolled oats) is more than the weight of the yellow corn flour (noncreditable grain).
 - Ingredients: *Yellow corn flour, whole-wheat flour*, sugar, *rolled oats*, wheat gluten. Contains 2% or less of each of the following: honey, salt, *oat bran*, yeast, molasses.

Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline (slaked lime) solution. If the product's PFS indicates that cornmeal or corn flour are nixtamalized, these ingredients are whole grain. For more information, review the CSDE's resource, *Crediting Whole Grains in the CACFP*.

2. **Combination foods:** A commercial combination food contains a grain portion from groups A-E or H-I of the USDA's Exhibit A chart. Examples include pizza crust in pizza, noodles in lasagna, and baked chicken coated with breadcrumbs or crushed cereal flakes. CACFP

facilities must obtain a PFS from the manufacturer stating the amount of creditable grains in the **grain portion** of the product.

- 3. **Manufacturer's crediting claim:** The manufacturer claims that a commercial product can provide the minimum creditable grains using a serving that is less than the minimum weight or volume listed in the USDA's Exhibit A chart.
- 4. **Product not listed in Exhibit A:** A commercial product is not listed in any of the nine groups listed in the USDA's Exhibit A chart.
- 5. **Different crediting:** The CACFP facility wants to credit a commercial product differently from the serving size listed in the USDA's Exhibit A chart.

The PFS must indicate the amount of creditable grains per serving, and demonstrate how the product provides that amount according to the USDA's regulations, guidance, or policy. CACFP facilities must verify the accuracy of the product's PFS prior to including the product in reimbursable meals and snacks, and must maintain all crediting documentation on file. The CSDE will review this information during the Administrative Review of the CACFP.

If the manufacturer will not supply a PFS, or the PFS does not provide the appropriate documentation, the product cannot credit as the grains component in CACFP meals and snacks.



Sample Calculations for Commercial Products in Groups A-E

Table 1 shows a sample calculation using method 1 to determine the CACFP grain servings for a commercial whole-wheat pancake product in group C. Table 2 shows a sample calculation for this same product using method 2.

Each method results in a different crediting contribution for this product. One pancake credits as ³/₄ serving of the grains component using method 1, and as one serving of the grains component using method 2. Whether this amount meets the full-required serving of the grains component depends on the age group and meal being served.

- Ages 1-2 and 3-5: The CACFP meal patterns for children require ½ serving of the grains component at breakfast, lunch, and supper; and at snack, if the CACFP facility serves the grains component as one of the two required snack components. Using method 1, one pancake credits as ¾ serving of the grains component, and serves one child. Using method 2, one pancake credits as one serving of the grains component and serves two children.
- Ages 6-12, ages 13-18 in at-risk afterschool programs and emergency shelters, and adult participants in adult day care centers: The CACFP meal patterns for children require one serving of the grains component for ages 6-12 and ages 13-18 at breakfast, lunch, and supper; and at snack, if the CACFP facility serves the grains component as one of the two required snack components. The CACFP adult meal patterns require two servings of the grains component at breakfast and lunch/supper; and one serving at snack, if the CACFP facility serves the grains component as one of the two required snack components. Using method 1, one pancake credits as ³/₄ serving of the grains component. The CACFP facility must provide 1½ pancakes to credit as one serving of the grains component. Using method 2, one pancake credits as one serving of the grains component.

For some products, methods 1 and 2 result in the same crediting contribution. CACFP facilities may use either method, but must document how the crediting information was determined (see "Choosing a Calculation Method").

To determine the meal pattern contribution of a commercial grain product using method 1, menu planners must use the weight (ounces or grams) of one serving from the product's Nutrition Facts label or PFS. If the product lists ounces and grams, menu planners may choose to use either one. To convert ounces to grams, multiply ounces by 28.35.



Table 1. Using method 1 (USDA's Exhibit A chart) to calculate the CACFP grain servings for commercial products in groups A-E

Whole-wheat Pancakes 1

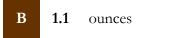
Manufacturer's serving size: Group C (USDA's Exhibit A chart):

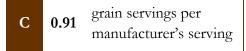
1 pancake: 1 ounce (28 grams) 1 serving = 31 grams or 1.1 ounces ½ serving = 16 grams or 0.6 ounce

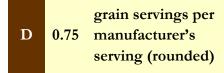
Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

- 1. List the weight of the **manufacturer's serving** from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).
- 2. List the required weight for **1 serving** for the product's group (A-E) in the USDA's Exhibit A chart. ²
- 3. Determine the **CACFP grain servings** in one serving of the product: Divide A by B.
- 4. Round **down** the number in C to the nearest ¹/₄ **serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.









Crediting: The manufacturer's serving size (one pancake) provides ³/₄ serving of the grains component.

- ¹ This product is whole grain-rich (WGR) because whole-wheat flour is the first ingredient (excluding water) and the next and only other grain ingredient is enriched. For more information, review the CSDE's resource, *Whole Grain-rich Criteria for the CACFP*.
- ² Calculations use the weight for the appropriate group in the USDA's Exhibit A chart. For more information, review the CSDE's resource, *Grain Servings for the CACFP*.

Table 2. Using method 2 (creditable grains) to calculate the CACFP grain servings for commercial products in groups A-E

Whole-wheat Pancakes 1

Manufacturer's serving size:

1 pancake: 1 ounce (28 grams)

Group C (USDA's Exhibit A chart):

1 serving = 31 grams or 1.1 ounces $\frac{1}{2}$ serving = 16 grams or 0.6 ounce Creditable grains per serving (from product's PFS):

Whole-wheat flour: 9 grams Enriched flour: 8 grams Noncreditable grains: 0 grams

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

1. List the **combined weight (grams)** of whole and enriched grains in one serving from the product's PFS (1 ounce = 28.35 grams). ²

9 grams of whole-wheat flour +

8 grams of enriched flour =

17 grams of creditable grains

2. Determine the CACFP grain servings in one serving of the product: Divide A by 14.75

(1 serving = 14.75 grams of creditable grains).

3. Round **down** the number in B to the **nearest** 1/4 serving. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

A 17 grams

grain servings per В 1.15 manufacturer's serving

grain servings per C 1 manufacturer's serving (rounded)

Crediting: The manufacturer's serving size (one pancake) provides one serving of the grains component.

- ¹ This product is WGR because whole-wheat flour is the first ingredient (excluding water) and the next and only other grain ingredient is enriched. For more information, review the CSDE's resource, Whole Grain-rich Criteria for the CACFP.
- ² To credit a commercial product using method 2, CACFP facilities must obtain a PFS from the manufacturer.

Sample Calculations for Commercial Products in Group H

Table 3 shows a sample calculation using method 1 to determine the CACFP grain servings for a commercial whole-grain pasta product in group H. Table 4 shows a sample calculation for this same product using method 2.

Each method results in the same crediting contribution for this product. The ½-cup serving of pasta credits as one serving of the grains component. Whether this amount meets the full-required serving of the grains component depends on the age group and meal being served.



- Ages 1-2 and 3-5: The CACFP meal patterns for children require ½ serving of the grains component at breakfast, lunch, and supper; and at snack, if the CACFP facility serves the grains component as one of the two required snack components. Using either method 1 or 2, ½ cup of pasta credits as one serving of the grains component, and serves two children.
- Ages 6-12, 13-18 in at-risk afterschool programs and emergency shelters, and adult participants in adult day care centers: The CACFP meal patterns for children require one serving of the grains component for ages 6-12 and 13-18 at breakfast, lunch, and supper; and at snack, if the CACFP facility serves the grains component as one of the two required snack components. The CACFP adult meal patterns require two servings of the grains component at breakfast and lunch/supper; and one serving at snack, if the grains component is served. Using either method 1 or 2, ½ cup of pasta credits as one serving of the grains component.

For some products, methods 1 and 2 result in a different crediting contribution. CACFP facilities may use either method, but must document how the crediting information was determined (see "Choosing a Calculation Method")..

Cereal grains in group H typically credit based on the **cooked** serving. i.e., ½ cup of cooked cereal credits as one serving of the grains component. However, the menu planner may choose to calculate the product's grain servings based on the **dry uncooked weight**, i.e., 1 ounce of dry cereal grains credits as one grain serving. The menu planner must determine the weight (ounces or grams) of one serving from the commercial product's Nutrition Facts label or the manufacturer's PFS. If the product lists ounces and grams, the menu planner may choose to use either one.

Table 3. Using method 1 (USDA's Exhibit A chart) to calculate the CACFP grain servings for commercial products in group H

Whole-grain Pasta 1

Manufacturer's serving size:

Group H (USDA's Exhibit A chart):

30 grams dry (½ cup cooked)

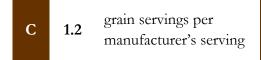
1 serving = $\frac{1}{2}$ cup cooked or 25 grams dry $\frac{1}{2}$ serving = $\frac{1}{4}$ cup cooked or 13 grams dry

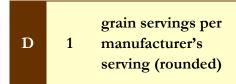
Ingredients: Whole grain durum wheat flour.

- 1. List the weight of the **manufacturer's serving** from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).
- List the required uncooked (dry) weight (25 grams) for one serving for group H in the USDA's Exhibit A chart. ²
- 3. Determine the **CACFP grain servings** in one serving of the product: Divide A by B.
- 4. Round **down** the number in C to the nearest 1/4 **serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.









Crediting: The manufacturer's serving size (½ cup cooked) provides one serving of the grains component

- ¹ This product is WGR because whole-wheat flour is the first ingredient and the next and only other grain ingredient is enriched. For guidance on identifying WGR foods, review the CSDE's resource, *Whole Grain-rich Criteria for the CACFP*.
- ² Calculations use the weight for group H in USDA's Exhibit A chart, which requires 25 grams dry to credit as one serving of the grains component, and 13 grams dry to credit as ½ serving. For more information, review the CSDE's resource, *Grain Servings for the CACFP*.

Table 4. Using method 2 (creditable grains) to calculate the CACFP grain servings for commercial products in group H

Whole-grain Pasta 1

Manufacturer's serving size:

32 grams (½ cup cooked)

Group H (USDA's Exhibit A chart):

1 serving = $\frac{1}{2}$ cup cooked or 25 grams dry $\frac{1}{2}$ serving = $\frac{1}{4}$ cup cooked or 13 grams dry

Ingredients: Whole grain durum wheat flour.

1. List the **combined weight (grams)** of whole and enriched grains in one serving (½ cup) from the product's PFS (1 ounce = 28.35 grams). ²

14 grams of whole-wheat flour +

12 grams of enriched flour =

26 grams of creditable grains

- 2. Determine the **CACFP grain servings** in one serving of the product: Divide A by 25 (25 grams of creditable grains = one grain serving).
- 3. Round **down** the number in B to the nearest

 1/4 **grains serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

Creditable grains per serving (from product's PFS):

Whole-wheat flour: 14 grams Enriched flour: 12 grams Noncreditable grains: 0 grams

A 26 grams

B 1.04 grain servings per manufacturer's serving

grain servings per
manufacturer's
serving (rounded)

Crediting: The manufacturer's serving size (½ cup cooked) provides one serving of the grains component

- ¹ This product is WGR because whole-wheat flour is the first ingredient and the next and only other grain ingredient is enriched. For guidance on identifying WGR foods, review the CSDE's resource, *Whole Grain-rich Criteria for the CACFP*.
- ² To credit a commercial product using method 2, CACFP facilities must obtain a PFS from the manufacturer.

Choosing a Calculation Method

For some commercial grain products, methods 1 and 2 may result in a different crediting contribution. For example, a 1-ounce bagel might credit as one serving of the grains/breads component using method 1 (USDA's Exhibit A chart), but might credit as $1\frac{1}{2}$ servings using method 2 (creditable grains). CACFP facilities may choose to use either method for all foods in the USDA's Exhibit A chart, but must document which method is used for each product.

CACFP facilities should use the same calculation method each time the same product is on the menu. For example, if the CACFP facility uses method 2 to determine the crediting of a whole-grain bagel, that same bagel should always be credited using method 2.

The CSDE strongly recommends choosing one calculation method for consistent crediting. This simplifies menu planning and assists CACFP facilities with documenting compliance with the CACFP meal pattern requirements for the grains component.

Using Method 1 (Exhibit A chart)

To use the USDA's Exhibit A chart for commercial products, CACFP facilities must have the product's Nutrition Facts label or PFS indicating the weight (ounces or grams) of the manufacturer's serving. To use the USDA's Exhibit A chart for foods made on site, CACFP facilities must have a standardized recipe that indicates the weight of the prepared serving of the recipe after cooking or baking. Many recipes do not provide this information. If the recipe does not list the serving weight, the CACFP facility must determine the average weight per serving by weighing several servings of the recipe. For more information, review the CSDE's form, *Yield Study Data Form for Child Nutrition Programs*.

Using Method 2 (creditable grains)

To use method 2 for commercial products, CACFP facilities must obtain a PFS from the manufacturer that documents the weight of all creditable and noncreditable grains per serving (see "Method 2: Creditable Grains"). To use method 2 for foods made on site, CACFP facilities must have a standardized recipe that indicates the weight of each creditable and noncreditable ingredient. For assistance with recipe calculations, such as converting fractions to decimals, review the ICN's *Basics at a Glance Portion Control Poster* and the decimal equivalents of fractions in the "Introduction" section of the USDA's FBG. If the recipe is not standardized and lists only the volume of grain ingredients, CACFP facilities must calculate the weight equivalent (grams) of each grain ingredient (see "Method 2 calculation for recipes listing the volume of grain ingredients").

Sample Calculations for Foods Made on Site

CACFP facilities must have recipes on file to document the meal pattern contribution of grain foods prepared on site, such as breads, rolls, muffins, pizza dough, and pancakes. The CACFP grain servings in one serving of a recipe are determined using the appropriate weight (groups A-E) or volume (groups H-I) in the USDA's Exhibit A chart (method 1), or the weight of creditable grains per serving (method 2). For more information, see "Using Method 1 (Exhibit A chart" and "Using Method 2 (creditable grains)."



The CSDE encourages CACFP facilities to use method 2 for recipes in groups A-E because it provides more accurate crediting information. Foods in group H (cereal grains such as rice and pasta) typically credit based on the cooked serving, i.e., ½ cup credits as one serving.

CACFP facilities do not need to calculate grain servings for foods prepared from the USDA's recipes for Child Nutrition Programs. These standardized recipes specify the meal pattern crediting information per serving. For links to the USDA's recipes, visit the Institute of Child Nutrition's (ICN) Child Nutrition Recipe Box and the "Recipes" section of the CSDE's Menu Planning for Child Nutrition Programs webpage. For information on standardized recipes, visit the "Crediting Foods Prepared on Site in CACFP Child Care Programs" or "Crediting Foods Prepared on Site in CACFP Adult Day Care Centers" sections of the CSDE's CACFP webpages.

Method 2 calculation for recipes listing the weight of grain ingredients

Table 5 shows how to use method 2 to calculate the CACFP grain servings for a standardized recipe that lists the weight of the grain ingredients. Foods in groups A-E must contain 14.75 grams of creditable grains per recipe serving to credit as one serving of the grains component; or 7.38 grams of creditable grains to credit as ½ serving of the grains component. One serving of this recipe credits as ¾ serving of the grains component.

Table 5. Using method 2 (creditable grains) to calculate the CACFP grain servings for recipes listing the weight of grain ingredients

WGR recipe for multi-grain bread ¹

Yield: 100 servings Grain ingredients:

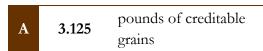
Serving size: one piece Whole-wheat flour: 8 ounces (0.5 pound)

Rolled oats: 1 pound 2 ounces (1.125 pounds) ²

Enriched flour: 1 pound

Enriched cornmeal: 8 ounces (0.5 pound)²

Determine the total weight (pounds) of all creditable grains in the recipe (16 ounces = 1 pound). Convert fractions to decimals, e.g., 1³/₄ pounds equals 1.75 pounds.



- 1.625 pounds of whole grains (whole-wheat flour and rolled oats) +
- 1.5 pounds of enriched grains (enriched flour and enriched cornmeal) =
- 3.125 pounds of creditable grains
- 2. Determine the **total grams of creditable grains** in the recipe: Multiply A by 453.6 (1 pound = 453.6 grams).
- 3. List the **number of servings** in the recipe.
- 4. Determine the **grams of creditable grains** per recipe serving: Divide B by C.
- 5. Determine the **CACFP** grain servings per recipe serving: Divide D by 14.75 (1 serving = 14.75 grams of creditable grains). ²
- 6. Round **down** the number in E to the nearest ¹/₄ **serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

В	1417.5	grains
С	100	servings per recipe
D	14.175	grams of creditable grains per recipe serving
Е	0.96	grain servings per recipe serving
F	0.75	grain servings per recipe serving (rounded)

grams of creditable

Crediting: The recipe's serving (one piece) provides 3/4 serving of the grains component

- ¹ This recipe is WGR because the combined weight (1.625 pounds) of all whole grains (whole-wheat flour and rolled oats) is more than the combined weight (1.5 pounds) of all enriched grains (enriched flour and enriched cornmeal). For more information, review the CSDE's resource, *Whole Grain-rich Criteria for the CACFP*.
- ² Dry cereal grains used as an ingredient in a recipe (such as rolled oats and cornmeal) credit the same as groups A-E (14.75 grams of creditable grains credit as one serving of the grains component; and 7.38 grams of creditable grains credit as ½ serving of the grains component).

Method 2 calculation for recipes listing the volume of grain ingredients

To determine the grain servings of a recipe using method 2, CACFP facilities must first convert the volume (e.g., cups and quarts) of each grain ingredient to weight (grams). CACFP facilities may use any of the methods below for this calculation.

- Use the manufacturer's serving size information on the Nutrition Facts label for the grain ingredient, such as whole-wheat flour, enriched flour, or whole-grain cornmeal. For example, a recipe contains 2 cups of whole-grain flour. The product's Nutrition Facts label states that ¹/4 cup of whole-grain flour weighs 32 grams. Multiply the weight of the manufacturer's serving (30 grams) by the amount of the ingredient used in the recipe (2 cups) to determine the weight of the ingredient used in the recipe (256 grams).
- Search the USDA's FoodData Central nutrient database for grain ingredients, such as wholewheat flour or yellow cornmeal. Enter "1" in the data field for the cup measurement, and the database will provide the weight of 1 cup of that ingredient.
- Use volume equivalent charts that list the weight of 1 cup of grain ingredients. Table 6 shows the weight per cup for some commonly used grain ingredients.
- Determine the average weight of 1 cup of the grain ingredient by measuring and weighing several samples. For more information, review the CSDE's form, Yield Study Form for Child Nutrition Programs.

Table 7 shows how to use method 2 to calculate the CACFP grain servings for a recipe that lists the volume (cups) of grain ingredients. One serving of this recipe credits as ³/₄ serving of the grains component.



Food item	Weight (grams) per cup	
Barley, flour or meal ²	148	
Barley, hulled ²	184	
Barley, pearled, uncooked ²	200	
Barley, pearled, cooked ²	157	
Breadcrumbs, dry, grated, plain ²	108	
Breadcrumbs, plain, dry, grated, seasoned ²	120	
Breadcrumbs, plain soft, white ²	45	
Bulgur, uncooked ²	140	
Bulgur, cooked ²	182	
Cereal, General Mills Cheerios ³	28	
Cereal, General Mills Corn Chex ³	31	
Cereal, General Mills Rice Chex ³	27	
Cereal, General Mills Wheat Chex ³	47	
Cereal, General Mills Wheaties ³	36	
Cereal, Kellogg's All-Bran Bran Buds ⁴	90	
Cereal, Kellogg's All-Bran Original ⁴	62	
Cereal, Kellogg's Corn Flakes crumbs ⁴	88	
Cereal, Kellogg's Corn Flakes, whole ⁴	28	
Cereal, Kellogg's Rice Krispies ⁵	26	
Cereal, Quaker Puffed Rice ⁵	14	
Cereal, Quaker Puffed Wheat ⁵	28	
Cornmeal, enriched, uncooked, yellow, degerminated ²	157	
Cornmeal, enriched, uncooked, yellow, whole grain ²	122	
Cracker crumbs, graham, crushed ²	84	
Cracker crumbs, snack, standard snack-type, regular, crushed ²	52	

Table 6. Weights of 1 cup of commonly used grain ingredients ¹ , continued				
Food item	Weight (grams) per cup			
Flour, buckwheat, whole groats ²	120			
Flour, corn, whole grain, yellow ²	117			
Flour, rice, brown ²	158			
Flour, rice, white ²	158			
Flour, rye, dark ²	128			
Flour, rye, light ²	102			
Flour, wheat, white, all-purpose enriched, bleached ²	125			
Flour, wheat, white, all-purpose enriched, unbleached ²	125			
Flour, wheat, white, bread, enriched ²	137			
Flour, wheat, white, cake, enriched, unsifted, dipped ²	137			
Flour, wheat, white, self-rising, enriched ²	125			
Flour, wheat, whole grain ²	120			
Wheat germ, uncooked, plain ²	88			
Wheat germ, toasted, plain ²	115			
Oat bran, raw ²	94			
Oat bran, cooked ²	219			
Oats, rolled, quick, uncooked ²	81			
Oats, rolled, regular, uncooked ²	81			

- ¹ The use of brand-name products is solely for clarification regarding serving sizes and does not constitute approval or endorsement by the USDA or CSDE. The actual weight of 1 cup may be more or less than the weights in this chart, depending on the measuring method used, e.g., stirred or unstirred, sifted or unsifted, spooned or dipped, and coarsely or finely crushed. For the most accurate conversion of volume to weight, calculate the average weight of 1 cup of the ingredient by measuring and weighing several samples. For more information, review the CSDE's form, *Yield Study Form for Child Nutrition Programs*.
- ² USDA's FoodData Central database (Standard Reference (SR) Legacy Data): https://fdc.nal.usda.gov/
- ³ General Mills Cereals: https://www.generalmills.com/en/Brands/Cereals
- ⁴ Kellogg's Cereals: https://www.kelloggs.com/en_US/home.html
- ⁵ Quaker Cereals: https://www.quakeroats.com/products

Table 7. Using method 2 (creditable grains) to calculate the CACFP grain servings for recipes listing the volume of grain ingredients

Multi-grain bread 1

25 servings (one pi	ece)	Convert cups to grams		
Grain ingredient	Measure	Grams per cup ²	Weight (grams)	
Whole-wheat flour	2 cups	X 120 =	240.00 grams	
Rolled oats ³	³ / ₄ cup	X 181 =	60.75 grams	
All-purpose enriched flour	2 cups	X 125 =	250.00 grams	
Enriched cornmeal ³	¹⁄₄ cup	X 138 =	34.50 grams	
	585.25 grams			

1. Determine the **combined weight (grams)** of all creditable grains in the recipe.

A 585.25 grams

300.75 grams of whole grains (whole-wheat flour and rolled oats) + 284.5 grams of enriched grains (all-purpose enriched flour and enriched cornmeal) = 585.25 grams of creditable grains

- 2. List the **number of servings** in the recipe.
- 3. Determine the **grams of creditable grains** per serving: Divide A by B.
- 4. Determine the **CACFP grain servings** per recipe serving: Divide D by 14.75 (1 serving = 14.75 grams of creditable grains). ³
- 5. Round **down** the number in D to the nearest 1/4 **serving**. For example, 1.49 and 1.27 round down to 1.25, and 1.24 rounds down to 1.

В	25	servings per recipe
С	23.41	grams of creditable grains per recipe serving
D	1.59	grain servings per recipe serving
Е	1.5	grain servings per recipe serving (rounded)

Crediting: The recipe's serving (one piece) provides 1½ servings of the grains component.

- This recipe is WGR because the combined weight (1.625 pounds) of all whole grains (whole-wheat flour and rolled oats) is more than the combined weight (1.5 pounds) of all enriched grains (enriched flour and enriched cornmeal). For more information, review the CSDE's resource, *Whole Grain-rich Criteria for the CACFP*.
- ² The grams per cup are from the USDA's FoodData Central database (Standard Reference (SR) Legacy Data).
- ³ Dry cereal grains used as an ingredient in a recipe (such as rolled oats and cornmeal) credit the same as groups A-E (14.75 grams of creditable grains credit as one serving of the grains component; and 7.38 grams of creditable grains credit as ½ serving of the grains component).

Crediting Worksheets for Grains

The CSDE's CACFP crediting worksheets evaluate grain-based foods for compliance with the CACFP crediting, WGR, and serving requirements. These worksheets include:

- Adult Centers Worksheet 1: Crediting Commercial Grains in the CACFP;
- Adult Centers Worksheet 2: Crediting Ready-to-eat Breakfast Cereals in the CACFP;
- Adult Centers Worksheet 3: Crediting Cooked Breakfast Cereals in the CACFP;
- Adult Centers Worksheet 4: Crediting Family-size Recipes for Grains in the CACFP;
- Adult Centers Worksheet 5: Crediting Quantity Recipes for Grains in the CACFP.
- Child Care Worksheet 1: Crediting Commercial Grains in the CACFP;
- Child Care Worksheet 2: Crediting Ready-to-eat Breakfast Cereals in the CACFP;
- Child Care Worksheet 3: Crediting Cooked Breakfast Cereals in the CACFP;
- Child Care Worksheet 4: Crediting Family-size Recipes for Grains in the CACFP; and
- Child Care Worksheet 5: Crediting Quantity Recipes for Grains in the CACFP.

The adult day care center crediting worksheets are available in the "CSDE Crediting Worksheets for CACFP Adult Day Care Centers" section of the CSDE's Crediting Foods in CACFP Adult Day Care Centers webpage. The child care crediting worksheets are available in the "CSDE Crediting Worksheets for CACFP Child Care Programs" section of the CSDE's Crediting Foods in CACFP Child Care Programs webpage.



Resources

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Accepting Processed Product Documentation in the CACFP (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/CACFP/Crediting/AcceptDocumentationCACFP.pdf
Basics at a Glance Portion Control Poster (Institute of Child Nutrition):
   https://theicn.org/icn-resources-a-z/basics-at-a-glance/
CACFP Grains Ounce Equivalents Resources – Handouts, training slides, and webinars in
   English and Spanish (USDA):
   https://www.fns.usda.gov/tn/grains-ounce-equivalents-resources-cacfp
Crediting Breakfast Cereals in the CACFP (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CreditCerealsCACFP.pdf
Crediting Enriched Grains in the CACFP (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/CACFP/Crediting/CreditEnrichedGrainsCACFP.pdf
Crediting Whole Grains in the CACFP (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/CACFP/Crediting/CreditWholeGrainsCACFP.pdf
Exhibit A: Grain Requirements for Child Nutrition Programs (USDA):
   https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/ExhibitA.pdf
Food Buying Guide Exhibit A Grains Tool (USDA):
   https://foodbuyingguide.fns.usda.gov/ExhibitATool/Index
Food Buying Guide Section 4: Overview of Crediting Requirements for the Grains Component
   (USDA):
   https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/USDA_FBG_Section4_Grains.pdf
Food Buying Guide Section 4: Yield Table for Grains (USDA):
   https://foodbuyingguide.fns.usda.gov/files/Reports/USDA_FBG_Section4_GrainsYieldTable.pdf
FoodData Central (USDA):
   https://fdc.nal.usda.gov/
Grain Crediting Worksheets for CACFP Adult Day Care Centers (Worksheets 1-5)
   ("Documents/Forms" section of the CSDE's Crediting Foods in CACFP Adult Day Care
   Centers webpage):
   https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Child-Care-
   Programs/Documents#CreditingWorksheets
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Grain Crediting Worksheets for CACFP Child Care Program (Worksheets 1-5)
   ("Documents/Forms" section of the CSDE's Crediting Foods in CACFP Child Care Programs
   webpage):
   https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Child-Care-
   Programs/Documents#CreditingWorksheets
Grain Ounce Equivalents for the CACFP (effective October 1, 2021) (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/GrainOzEqCACFP.pdf
Grain Servings for the CACFP (through September 30, 2021) (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/GrainServingsCACFP.pdf
Grain-based Desserts in the CACFP – Handouts and webinars in English and Spanish (USDA):
   https://www.fns.usda.gov/tn/grain-based-desserts-cacfp
Grains Component for CACFP Adult Day Care Centers (CSDE webpage):
   https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Adult-Day-Care-
   Centers/Documents#Grains
Grains Component for CACFP Child Care Programs (CSDE webpage):
   https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Child-Care-
   Programs/Documents#Grains
How to Identify Creditable Grains in the CACFP (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/CACFP/Crediting/IdentifyCreditableGrainsCACFP.pdf
How to Spot Whole Grain-Rich Foods for the CACFP – Handouts in English and Spanish
   (USDA):
   https://www.fns.usda.gov/tn/how-spot-whole-grain-rich-foods-cacfp
Identifying Whole Grain-rich Foods for the CACFP – Handouts and webinars in English and
   Spanish (USDA):
   https://www.fns.usda.gov/tn/identifying-whole-grain-rich-foods-cacfp
Is My Recipe Whole Grain-Rich in the CACFP? – Handouts in English and Spanish (USDA):
   https://www.fns.usda.gov/tn/my-recipe-whole-grain-rich-cacfp
Meal Patterns for CACFP Adult Day Care Centers (CSDE webpage):
   https://portal.ct.gov/SDE/Nutrition/Meal-Patterns-CACFP-Adult-Centers
Meal Patterns for CACFP Child Care Programs (CSDE webpage):
   https://portal.ct.gov/SDE/Nutrition/Meal-Patterns-CACFP-Child-Care-Programs
Product Formulation Statement for Documenting Grains in Child Nutrition Programs
   (effective October 1, 2021) (USDA):
   https://fns-prod.azureedge.net/sites/default/files/resource-
   files/PFS_Document_Grains_oz_eq.pdf
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Product Formulation Statement for Documenting Grains in Child Nutrition Programs (effective October 1, 2021) – Completed Sample (USDA): https://fns-prod.azureedge.net/sites/default/files/resource-files/PFS_Sample_oz_eq.pdf Product Formulation Statement for Documenting Grains/Breads Servings in the Child and Adult Care Food Program, Summer Food Service Program, and NSLP Afterschool Snacks (through September 30, 2021) (USDA): https://fns-prod.azureedge.net/sites/default/files/resourcefiles/PFS_Document_Grains_Breads_Servings.pdf Product Formulation Statement for Documenting Grains/Breads Servings in the Child and Adult Care Food Program, Summer Food Service Program, and NSLP Afterschool Snacks (through September 30, 2021) – Completed Sample (USDA): https://www.fns.usda.gov/sites/default/files/resourcefiles/PFS_Samples_Grains_Breads_Servings.pdf Resources for the SFSP Meal Patterns (CSDE): https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/MealPattern/ResourcesSFSPMealPattern.pdf Standardized Recipe Form for the CACFP (CSDE): https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/StandardizedRecipeCACFP.doc Standardized Recipes in CACFP Adult Day Care Centers ("Documents/Forms" section of the CSDE's Crediting Foods in CACFP Adult Day Care Centers webpage): https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Adult-Day-Care-Centers/Documents#StandardizedRecipes Standardized Recipes in CACFP Child Care Programs ("Documents/Forms" section of the CSDE's Crediting Foods in CACFP Child Care Programs webpage): https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-CACFP-Child-Care-Programs/Documents#StandardizedRecipes USDA Final Rule (84 FR 50287): Delayed Implementation of Grains Ounce Equivalents in the Child and Adult Care Food Program: https://www.federalregister.gov/documents/2019/09/25/2019-20808/delayedimplementation-of-grains-ounce-equivalents-in-the-child-and-adult-care-food-program USDA Memo CACFP 09-2018: Grain Requirements in the Child and Adult Care Food Program;

https://www.fns.usda.gov/cacfp/grain-requirements-cacfp-questions-and-answers

USDA Memo CACFP 16-2017: Grain-Based Desserts in the Child and Adult Care Food Program:

https://www.fns.usda.gov/cacfp/grain-based-desserts-child-and-adult-care-food-program

Questions and Answers:

USDA Memo SP 34-2019, CACFP 15-2019 and SFSP 15-2019: Crediting Coconut, Hominy, Corn Masa, and Masa Harina in the Child Nutrition Programs:

https://www.fns.usda.gov/cn/crediting-coconut-hominy-corn-masa-and-masa-harina-child-nutrition-programs

Using Child Nutrition (CN) Labels in the CACFP (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CNlabelCACFP.pdf

Using Ounce Equivalents for Grains in the CACFP (USDA):

https://fns-prod.azureedge.net/sites/default/files/resource-

files/CACFPworksheetGrainsOzEq%20.pdf

Using Product Formulation Statements in the CACFP (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/PFScacfp.pdf

Webinar: Exhibit A Grains Tool to the Rescue (USDA):

https://www.fns.usda.gov/tn/exhibit-grains-tool-rescue

Webinar: How to Maximize the Exhibit A Grains Tool (USDA):

https://www.fns.usda.gov/tn/how-maximize-exhibit-grains-tool

Whole Grain-rich Criteria for the CACFP (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/WGRCriteriaCACFP.pdf

Yield Study Form for Child Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/YieldStudy.pdf



For more information, visit the CSDE's Crediting Foods in CACFP Child Care Programs and Crediting Foods in CACFP Adult Day Care Centers webpages, or contact the CACFP staff in the CSDE's Bureau of Health/Nutrition, Family Services and Adult Education, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841.

This document is available at https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/GrainCalculationCACFP.pdf.

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